

ABSTRACT

A modem system for receiving and transmitting signals having a frequency domain equalizer (FEQ) block being responsive to a frequency channel response for processing the same to generate one or more equalizer coefficients, said modem system being responsive to an input signal for processing the same to generate said frequency channel response, said input signal being generated from transmission of a transmitted signal, said FEQ block for using said equalizer coefficients to generate an equalized channel response, said modem system for using said equalized channel response to generate one or more metric weights, in accordance with an embodiment of the present invention. The modem system further includes a weighting block being responsive to said metric weights, said modem system for using said equalizer coefficients to assign weighting values to each of said metric weights, said weighting block for using said metric weights to generate one or more weighted metrics, said weighted metrics for reducing the effects of fading in said frequency channel response, wherein said weighted metrics improve the performance of said modem system by mitigating the effects of fading due to multi-path channel in transmission of said transmitted signal.